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Kanji Kirmoto

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* KANJI KIRMOTO, TSUYOSHI SAKAHITA  
And KAZUHISA YAMAHITA

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Appeal 2009-2559  
Application 10/826,173  
to reissue Patent 6,557,671  
Technology Center 3600

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Mailed: March 09, 2009

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*Before:* FRED E. McKELVEY, *Senior Administrative Patent Judge*,  
and HOWARD B. BLANKENSHIP and ALLEN R. MacDONALD,  
*Administrative Patent Judges.*

McKELVEY, *Senior Administrative Patent Judge.*

INTERLOCUTORY ORDER—ADDITIONAL BRIEFING

1       **A. Statement of the case**

2       The application on appeal ("reissue application") was filed to  
3 reissue U.S. Patent 6,557,671 B1. The patent is based on  
4 application 09/531,570, filed 26 March 2000 ("original application").

1 In the reissue application on appeal, the real party in interest  
2Shimano, Inc. ("**Shimano**") seeks review under 35 U.S.C. § 134(a) of  
3a final rejection (mailed 28 September 2007) of:

4 (1) claims 37-60 and 69-74 as being unpatentable based  
5 on "recapture";

6 (2) claims 37-43, 47-54 and 69-74 as being unpatentable  
7 under 35 U.S.C. § 103 over (i) Le Deit, U.S. Patent 5,697,475,  
8 (ii) Carre, U.S. Patent 4,582,177, and (iii) Huang, U.S. Patent  
9 6,148,964;

10 (3) claims 55-59 as being unpatentable under 35 U.S.C.  
11 § 103 over (i) Le Deit, (ii) Carre, (iii) Huang and (iv) Isai, U.S.  
12 Patent 5,960,914; and

13 (4) claim 60 as being unpatentable over (i) Le Deit,  
14 (ii) Carre, (iii) Huang, (iv) Isai and (v) Mott, U.S. Patent  
15 5,201,402.

16  
17 Claims 1-36, 61, 63-65 and 67-68 have been allowed.  
18 We have jurisdiction under 35 U.S.C. § 134(a).

19  
20 **B. Findings of fact**

21 Prosecution history

22 Original claim 1

23 The original application, as filed, contained claims 1-13.

24 Original claim 1 read [bracketed matter added]:

25 A cable disc brake comprising:

26 [1] a caliper housing;

7

1 [2] a first friction member movably coupled to said caliper  
2 housing between a release position and a braking position;

3 [3] a second friction member coupled to said caliper  
4 housing and arranged substantially parallel to said first friction  
5 member to form a rotor receiving slot therebetween; and

6 [4] an actuated mechanism movably coupled to said  
7 caliper housing to move said first friction member from said  
8 release position towards said second friction member to said  
9 braking position, said actuated mechanism having first and  
10 second cam members movably arranged between an axially  
11 retracted position and an axially extended position with a guide  
12 member interconnecting said first and second cam members  
13 during movement between said axially retracted position and  
14 said axially extended position.

15

16 First rejection

17 All the original claims in the original application, including  
18 claim 1, were rejected under 35 U.S.C. § 102(b) as anticipated by  
19 Toyomasu, U.S. Patent 3,765,511. Office Action mailed 23 May 2001  
20 (Paper 6).

21

22 First amendment

23 In an amendment received by the USPTO on 09 August 2001  
24 (Paper 7, Amendment A), claim 1 was amended to read [bracketed  
25 matter added; limitations added shown in underlining]:

26 Claim 1 (amended). A cable disc brake comprising:

27 [1] a caliper housing;

11

1 [2] a first friction member movably coupled to said caliper  
2 housing between a release position and a braking position;

3 [3] a second friction member coupled to said caliper  
4 housing and arranged substantially parallel to said first friction  
5 member to form a rotor receiving slot therebetween; and

6 [4] an actuated mechanism movably coupled to said  
7 caliper housing to move said first friction member in an axial  
8 direction from said release position towards said second friction  
9 member to said braking position without rotating said first  
10 friction member, said actuated mechanism having first and  
11 second cam members movably arranged between an axially  
12 retracted position and an axially extended position with a guide  
13 member interconnecting said first and second cam members  
14 during movement between said axially retracted position and  
15 said axially extended position,

16 one of said first and second cam members being rotatably  
17 mounted within said caliper housing, and the other of said first  
18 and second cam members being movably mounted in said axial  
19 direction.

20

21 In remarks, Shimano said inter alia the following:

22 In response, Applicant has amended independent  
23 claim 1 to clearly define the present invention over the  
24 prior art of record. Amendment, pages 4-5.

25 In particular, independent claim 1 has been  
26 amended to recite a cable disc brake having first and

15

1 second cam members with one of the first and second  
2 cam members being rotatably mounted within the caliper  
3 housing, and the other of the first and second cam  
4 members being movably mounted in the axial direction.  
5 Moreover, independent claim 1 has been amended to  
6 recite that the first friction members moves in an axial  
7 direction without rotating. Clearly, this structure is **not**  
8 disclosed or suggested by Toyomasu or any other prior  
9 art of record. More specifically, the Office Action relies on  
10 the embodiment shown in Figure 33 of Toyomasu to  
11 reject claims 1-13. However, the first and second  
12 camming [sic—cam ?] members 16 and 43 of Toyomasu  
13 do not operate in the same manner as set forth in  
14 independent claim 1, as now amended. More specifically,  
15 the **camming** [sic—cam ?] **member 16** of Toyomasu is  
16 designed to rotate and move axially while the **camming**  
17 [sic—cam member ?] **43** of Toyomasu is designed to be a  
18 **stationary member**.

19 Accordingly, neither the camming member **16** of  
20 Toyomasu nor the camming member **43** of Toyomasu rotates  
21 but does not move axially, or moves axially but does not rotate  
22 as now set forth in amended claim 1. Moreover, claim 1 now  
23 recites that the **first friction members moves in an axial**  
24 **direction but does not rotate**. In the cable brake device of  
25 Toyomasu, the friction member 6 is both **rotated** and **moved**  
26 **axially**. Amendment A (Paper 7), page 5.

1

2

3

Second rejection

4 After a notice of allowance, withdrawal from issue and a filing of  
5an RCE [request for continued examination], there came a time when  
6a second rejection was entered by the Examiner. Office Action  
7mailed 11 July 2002 (Paper 14).

8 At this point, the original application contained claims 1-20.

9 Claims 1-20 were rejected under 35 U.S.C. § 102(b) as  
10anticipated by Kawaguchi [U.S. Patent 3,789,959].

11

12

Second amendment

13 A response to the second rejection was received by the USPTO  
14on 08 November 2002. Paper 16 (Amendment B).

15 In response to the second rejection, claim 1 was again  
16amended [some bracketed matter added, limitations added by the  
17first amendment shown in bold; limitations deleted shown in  
18strikethrough and limitations added shown in underlining]:

19 Claim 1 (twice amended). A cable disc brake comprising:

20 [1] a caliper housing;

21 [2] a first friction member movably coupled to said caliper  
22 housing between a release position and a braking position;

23 [3] a second friction member coupled to said caliper  
24 housing and arranged substantially parallel to said first friction  
25 member to form a rotor receiving slot therebetween; and

26 [4] an actuated mechanism movably coupled to said  
27 caliper housing to move said first friction member **in an axial**

1        **direction** from said release position towards said second  
2        friction member to said braking position ~~**without rotating said**~~  
3        ~~**first friction member**~~, said actuated mechanism having first  
4        and second cam members movably arranged between an  
5        axially retracted position and an axially extended position with a  
6        guide member interconnecting said first and second cam  
7        members during movement between said axially retracted  
8        position and said axially extended position.

9        ~~**one of said first and second cam members being**~~  
10       ~~**rotatably mounted within said caliper housing, and the**~~  
11       ~~**other of said first and second cam members being movably**~~  
12       ~~**mounted in said axial direction**~~ including

13        an input cam movably mounted within said caliper  
14        housing to move in a rotational direction about a longitudinal  
15        axis, but not in an axial direction, said input cam having first  
16        camming surface with an axially extending guide member non-  
17        movably fixed thereto as said longitudinal axis, and

18        an output cam movably mounted within said caliper  
19        housing to move in the axial direction in response to rotation of  
20        said input cam, but not in the rotational direction, said output  
21        cam having a second camming surface with an axially  
22        extending bore, said guide member being at least partially  
23        disposed within said bore to ensure smooth relative movement  
24        between said input and output cams.



1 In remarks, Shimano said inter alia the following:

2 Specifically, Applicants have amended independent  
3 claim 1 to clarify that the actuated mechanism includes an  
4 input cam movably mounted within said caliper housing to  
5 move in a rotational direction about a longitudinal axis,  
6 but not in an axial direction, said input cam having a first  
7 camming surface with an axially extending guide member  
8 non-movably fixed thereto at said longitudinal axis, and  
9 an output cam movably mounted within said caliper  
10 housing to move in the axial direction in response to  
11 rotation of said input cam, but not in the rotational  
12 direction, said output cam having a second camming  
13 surface with an axially extending bore, said guide  
14 member being at least partially disposed within said bore  
15 to ensure smooth relative movement between said input  
16 and output cams.

17 \* \* \*

18 Applicants do not believe the unique arrangements of  
19 independent claim[ ] 1... [is] disclosed or suggested in the  
20 Kawaguchi patent.

21 Specifically, the Kawaguchi patent basically  
22 discloses a disc brake which includes an operation lever  
23 **14** loosely mounted to the treated tube **12** behind a plate  
24 **13**. The plate **13** is a pressure receiving plate while the  
25 operation lever **14** acts to actuate the pressure receiving  
26 plate **13**. Balls **16** are disposed between the plates **13**

31

1 and **14**. When the operation lever **14** is turned, the  
2 pressure receiving plate **13** will cause, through the action  
3 of balls **16**, axial movement of treaded tube **12** and the  
4 adjusting screw **11** mounted therein, thereby urging pad **8**  
5 against the disc **2**. Thus, at best, the Kawaguchi patent  
6 discloses a guide member that is axially movable with the  
7 axially movable plate **13**. In other words, the Kawaguchi  
8 patent fails to disclose or suggest the axially extending  
9 guide member non-movably fixed to the input cam at the  
10 longitudinal axis, where the input cam is rotatably but not  
11 axially movable, as required by independent claim 1, as  
12 now amended. Amendment B (Paper 16), pages 7-8.

## 13

14 Claim 37 on appeal

15        Claim 37 on appeal deletes some limitations from claim 1 (twice  
16 amended—which claim 1 of the patent), but adds other limitations.

17 Claim 37 reads [bracketed matter added, limitations deleted  
18shown in strikethrough and limitations added shown in bold].

19           Claim 37. A cable disc brake **for a bicycle** comprising:  
20           a caliper housing **with a mounting bracket structured**  
21           **and dimensioned to be attached to a bicycle with a cable**  
22           **support having an opening for guiding a cable there**  
23           **through;**

24           **wherein the cable support extends from a surface of**  
25           **the caliper housing and is not adjustable in any direction**  
26           **relative to the surface of the caliper housing;**

1           a first friction member ~~movably~~ coupled to ~~said the~~ caliper  
2           housing **for movement** between a release position and a  
3           braking position;  
4           a second friction member coupled to ~~said the~~ caliper  
5           housing and arranged substantially parallel to said first friction  
6           member to form a rotor receiving slot therebetween; and  
7           an actuated mechanism movably coupled to ~~said the~~ caliper  
8           housing to move ~~said the~~ first friction member in an axial  
9           direction from ~~said the~~ release position towards ~~said the~~  
10          second friction member to ~~said the~~ braking position, ~~said~~  
11          **wherein the** actuated mechanism including  
12          ~~an input cam movably mounted within said caliper~~  
13          ~~housing to move in a rotational direction about a longitudinal~~  
14          ~~axis, but not in an axial direction, said input cam having first~~  
15          ~~camming surface with an axially extending guide member non-~~  
16          ~~movably fixed thereto as said longitudinal axis, and~~  
17          ~~an output cam movably mounted within said caliper~~  
18          ~~housing to move in the axial direction in response to rotation of~~  
19          ~~said input cam, but not in the rotational direction, said output~~  
20          ~~cam having a second camming surface with an axially~~  
21          ~~extending bore, said guide member being at least partially~~  
22          ~~disposed within said bore to ensure smooth relative movement~~  
23          ~~between said input and output cams~~ **comprises an elongated**  
24          **actuating arm rotatably coupled to the caliper housing to**  
25          **cause the actuated mechanism to move the first friction**

1       **member from the release position towards the braking**  
2       **position;**  
3               **wherein the actuating arm has a curved guide surface**  
4       **with a first portion coincident with a cable clamp and a**  
5       **second portion that extends from the first portion towards**  
6       **the cable support so that the cable, when coupled to the**  
7       **cable clamp, approaches the guide surface from the**  
8       **opening in the cable support essentially tangent to the**  
9       **guide surface and is supported by the guide surface when**  
10       **the first friction member in the release position.**

11  
12

Shimano's position

13       According to Shimano, claim 37 recites the following limitations:

14               (1) wherein the cable support extends from a  
15               surface of the caliper housing and is not adjustable in any  
16               direction relative to the surface of the caliper housing and  
17               (2) wherein the actuating arm has a curved guide  
18               surface with a first portion coincident with a cable clamp  
19               and a second portion that extends from the first portion  
20               towards the cable support so that the cable, when  
21               coupled to the cable clamp, approaches the guide surface  
22               from the opening in the cable support essentially tangent  
23               to the guide surface and is supported by the guide  
24               surface when the first friction member is in the release  
25               position.

26Appeal Brief, pages 11-12.

1 Further according to Shimano, these limitations "materially  
2narrow" claim 37 vis-à-vis patent claim 1 (which is claim 1 of the  
3original application, twice amended). Claim 37, therefore, is said to  
4"recite a distinct invention." Appeal Brief, page 12.

5 Examiner's findings

6 The Examiner correctly found that (1) the strikethrough  
7limitations of claim 37, as reproduced above, were deleted vis-à-vis  
8claim 1, and (2) the bold limitations were added.

9 The Examiner made no findings with respect to whether the  
10added bold limitations (1) relate to an aspect of the invention  
11overlooked (not claimed) during the original prosecution and, if so,  
12(2) materially narrow claim 37 with respect to the overlooked aspect  
13of the invention.

14 **C. Discussion**

15 Based on In re Clement, 131 F.3d 1464, 1470 (Fed. Cir. 1997),  
16the following principles apply.

17 Principle 1. If the reissue claim is as broad as or broader than  
18the cancelled or amended claim in all aspects, the recapture rule bars  
19the claim.

20 Principle 2. If the reissue claim is narrower than the cancelled  
21or amended claim in all aspects, the recapture rule does not apply,  
22but other rejections (e.g., § 102, § 103, § 112) are possible.

23 Principle 3: If the reissue claim is broader in some aspects, but  
24narrower in other aspects, than the cancelled or amended claim,  
25then:

1           Principle 3(a): if the reissue claim is as broad as or  
2broader in an aspect germane to a prior art rejection of a claim in the  
3original application, but narrower in another aspect completely  
4unrelated to the rejection, the recapture rule bars the reissue claim or

5           Principle 3(b): if the reissue claim is narrower in an  
6aspect germane to the prior art rejection, and broader in an aspect  
7unrelated to the rejection, the recapture rule does not bar the claim,  
8but other rejections are possible.

9           Hester Industries, Inc. v. Stein, Inc., 142 F.3d 1472, 1482-83  
10(Fed. Cir. 1998) (emphasis added; some citations omitted) has also  
11established an additional principle that:

12           [T]he recapture rule [may be avoided altogether] when  
13           the reissue claims are materially narrower in other  
14           overlooked aspects of the invention. The purpose of ...  
15           [this principle] is to allow the patentee to obtain through  
16           reissue a scope of protection to which ... [the patentee] is  
17           rightfully entitled for such overlooked aspects.

18           By "other ... aspects", Hester means aspects not previously  
19claimed during prosecution of the application maturing into the patent  
20sought to be reissued.

21           Accordingly, we can resolve a recapture rejection by  
22determining whether the "narrower in another aspect" (i.e., a  
23limitation of a reissue claims) was (1) overlooked during original  
24prosecution and (2) is material.

1 Whether an aspect of a reissue claim was overlooked during  
2original prosecution is fact based and is resolved on a case-by-case  
3basis.

4 Whether an aspect of a reissue claim is material is also fact  
5based and also resolved on a case-by-case basis. One way to show  
6materiality is to show that the reissue claim is patentable over the  
7prior art. Cf. Ex parte Bradshaw, Appeal 2006-2744, slip op.  
8at 15-20 (Bd. Pat. App. & Int. July. 19, 2007) (available on the  
9USPTO web cite at <http://www.uspto.gov> under Patents, Board of  
10Appeals and Interferences, BPAI Final Decisions, Reading Room,  
11search by identified entering Appeal No. 20062744, click on get info,  
12then click on application 09644794 at bottom).

13 We have been unable to find in the Appeal Brief, a detailed  
14factual analysis of the "overlooked" or "material" issues. We decline  
15to resolve either issue in the first instance without affording Shimano  
16an opportunity to present its position on the relevant facts. An  
17appellant, not the Board in the first instance, should set forth the  
18relevant facts upon which it bases its request for reversal of an  
19examiner's rejection.

20 To help us resolve the "recapture" rejection on appeal, we invite  
21Shimano to address the following points. In doing so, Shimano  
22should cite to the record of the original application and the application  
23on appeal.

1 Point (1)

2 We request that Shimano:

3 (1) reproduce all the claims of the patent, inserting  
4 therein in brackets a reference to the specification (e.g.,  
5 col. x:yy where x is a column number and yy are line  
6 number) and a reference to a drawing figure and drawing  
7 element number.

8 (2) reproduce claims 37, 72, 73 and 74 (the only  
9 claims separately argued in the Appeal Brief with respect  
10 to the recapture rejection), inserting therein in brackets a  
11 reference to the specification and a reference to a  
12 drawing figure and drawing element number. If Shimano  
13 intends for the Board to consider any other claim, then  
14 that claim as well should be reproduced inserting therein  
15 in brackets a reference to the specification and a  
16 reference to a drawing figure and drawing element  
17 number.

18 (3) reproduce original claim 1 of the original  
19 application, inserting therein in brackets a reference to the  
20 specification and a reference to a drawing figure and  
21 drawing element number.

22 (4) reproduce claim 1 (amended) of the original  
23 application, inserting therein in brackets a reference to the  
24 specification and a reference to a drawing figure and  
25 drawing element number.



1                   (5) reproduce claim 1 (twice amended) of the  
2                   original application, inserting therein in brackets a  
3                   reference to the specification and a reference to a  
4                   drawing figure and drawing element number.

5   Point (2)

6           Shimano should address (1) why relevant limitations in claims  
737 and 72-74 should be considered to have been "overlooked" and  
8(2) why those limitations are "material."

9   Point (3)

10          Shimano should state its views on what criteria should be used  
11to determine whether a limitation is "material". One way to show that  
12a newly added limitation is "material" is to establish that a reissue  
13claim containing the limitation is patentable over the prior art. Ex  
14parte Bradshaw, supra. There may be alternative ways. For  
15example, in cases involving § 135(b), "material" and "patentability"  
16(i.e., obviousness) do not mean the same thing. In re Berger, 279  
17F.3d 975, 981-982 (Fed. Cir. 2002). In presenting its views, Shimano  
18should address whether a reissue claim can contain new limitation  
19which can be considered "material" if the reissue claim does not  
20define subject matter patentable over the prior art.

21   Point (4)

22          Shimano should address whether the prosecution history set  
23out above is correct. If there are any errors, Shimano should point  
24out the error.

1 Point (5)

2 Shimano should address the precise limitations represented by  
3A, B, C, C' and D in the discussion on page 18 of the Appeal Brief  
4and 2 of the Reply Brief. For example, Shimano may comply with  
5Point (5) by stating: Limitation A is "quote limitation."

6  
7 **D. Time for taking action and responding**

8 Shimano must respond to this request for further briefing on or  
9before **11 May 2009**. 37 C.F.R. § 41.50(d) (2008).

10 Shimano should note that the time for response cannot be  
11extended. *Id.*

65Appeal 2009-2559

66Application 10/826,173

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